REMARKS

Claims 1-4, 7, 9-11, 13-16, 18 and 21 are pending in this application. Claims 1, 7, 13, 15, 18 and 21 are independent claims. By this amendment, claims 1, 2, 7, 13, 15, 16 and 18 are amended, claims 5, 6, 8, 12, 17, 19 and 20 are canceled without prejudice or disclaimer thereto, and new claim 21 is added.

Reconsideration in view of the above amendments and following remarks is respectfully solicited.

Drawing Corrections

The Office Action objects to Figs. 61-66 because only that which is old is illustrated. (see Office Action, page 2)

Applicants respectfully point out that in amended Figures 61-66, the legend "Conventional Art" is added.

As such, Applicants respectfully request withdrawal of the objections to the drawing and further requests that the corrected drawings be approved and made a part of the record of the above-identified application.

The Claims Satisfy The Requirements Of 35 U.S.C. §112, 1st and 2nd Paragraphs

The Office Action rejects (1) claim 1 under 35 U.S.C. §112, 1st paragraph and (2) claims 1 and 13 under 35 U.S.C. §112, 2nd paragraph. These 112 rejections are respectfully traversed.

As for the rejection under 112, 1st paragraph, the Examiner is alleging that the specification fails to describe how the motion speed or direction is detected within the one field or frame. (see

Office Action, page 3). Applicants respectfully disagree with this allegation.

Specifically, applicants respectfully submit that the present specification does indeed provide enablement for detecting the motion speed or direction within one field or frame. For example, on at least pages 75-83 of the present specification, an image display device employing the motion picture pseudo contour correction means is described. For instance, the present specification clearly discloses that a motion detecting section 20 is one of the principal components in the device. The motion detecting section 20 compares picture data of successive frames, and detects a motion vector indicative of a motion speed of a picture (direction and speed) regarding each pixel. (see present specification, page 77).

As such, applicants respectfully submit that at least the above-noted pages of the specification clearly describe how a motion speed and direction is detected.

As for the rejections under 112, 2nd paragraph, applicants submit that the amendments to claims 1 and 13 should be sufficient to obviate the rejections under 112, 2nd paragraph. Specifically, claim 1 is amended for clarity so that detection within one frame recited.

As for claim 13, the office Action alleges that claim 13 fails to describe how a correction-signal is generated. Applicants respectfully submit that the amendment to claim 13 obviates this rejection.

Again, applicants respectfully submit that the amendments to claims 1 and 13 obviate the rejection of claims 1 and 13 under 35 U.S.C. §112, 1st and 2nd paragraphs.

Accordingly, withdrawal of the rejections of claims 1 and 13 under 35 U.S.C. §112, 1st and 2nd paragraphs is respectfully solicited.

The Claims Define Patentable Subject Matter

The Office Action makes the following rejections: **(1)** claims 1, 3, 5, 7-9, 12, 14, 15 and 18 are rejected under 35 U.S.C. §102(b) as being anticipated by Mikoshiba (IDW 1996, pp.251-254)(hereafter Mikoshiba); **(2)** claims 2, 6, 13, 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mikoshiba in view of U.S. Patent No. 6,414,657 to Kasahara et al. (hereafter Kasahara); **(3)** claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Mikoshiba in view of Japanese Patent No. JP 7152017 A to Nito et al. (hereafter Nito); and **(4)** claims 4, 11, 19 and 20 rejected under 35 U.S.C. §103(a) as being unpatentable over Mikoshiba.
These rejections are respectfully traversed.

Applicants respectfully submit that Mikoshiba, either alone, or in combination with Kasahara or Nito, fails to teach or suggest each and every feature as set forth in the claimed invention.

Rejections under 35 U.S.C. §102(b) & §103(a)

Applicants respectfully submit that amended independent claims 1, 7, 13, 15 and 18 are distinguishable from the main cited art, Mikoshiba, for at least the following reasons:

The Office Action alleges that Mikoshiba discloses the claimed invention as set forth in independent claims 1, 7, 15 and 18.

Specifically, the Examiner directs our attention to Mikoshiba's Figs. 5 and 6 and to Mikoshiba's pp.253, col. 2, line 14 to pp. 254, col. 2, line 7.

However, in the above-noted sections of Mikoshiba, Mikoshiba merely discloses a motion-dependent equalizing pulse technique that detects the speed and direction of an image motion. In other words, Mikoshiba is using a combined "add positive or negative equalizing pulse technique" with the detection of speed and direction of an image motion to arrive at a corrected gray level signal.

Specifically, Mikoshiba detects the speed by counting the number of pixels that experience the identical bit-variation and detects the motion by comparing the number of these pixels in the horizontal and vertical directions. As such, in Mikoshiba's motion-dependent equalizing-pulse technique, Mikoshiba takes weighed equalizing pulses (positive or negative light emissions) and adds them to an original signal to reduce the dynamic false contours.

One aspect of the present invention is directed towards a motion picture pseudo contour correcting method/device wherein detection of a gray level shift from a focused pixel to an adjacent

pixel is detected as gray level information; and detection of a motion vector indicative of a speed and a direction of motion from a focused pixel to another pixel is detected as motion information. Thereafter, a corrected gray level signal is outputted based on the original signal of the picture, the gray level information, and the motion information.

Furthermore, the present invention detects a motion picture pseudo contour relating to two factors: space and time, i.e., the magnitude of gray level turbulence and a range of pixels affected by the gray level turbulence.

In addition, in the present invention as set forth in claims 1, 7, 15 and 18 describes the formulae used to generate the correction-use signal.

For example, in claim 1 the method generates a correction gray level signal using a logical formulae formularized for each motion picture pseudo contour generation pattern based on the generation patterns classified according to the respective gray level information of the focused pixel and adjacent pixel, and the motion information.

Independent claims 7, 13, 15, 18 and 21 recite similar means/formulae for generating a correction-use signal.

As such, the formulae used in the present invention are associated with motion picture pseudo contour generation patterns classified into fewer groups than the gray level shifts between a focused pixel and an adjacent pixel.

Motion picture display requires, among other things, correction of pseudo contours at improved speed. A practical technique implementing this is to compute values for the

correction-use signals using logic circuits or like hardware capable high speed processing, rather than software.

The present invention reduces the number of formulae to be prepared and hence simplifies the configuration of logic circuits to be prepared (corresponding to the correction-use signal generating section in claims 15 and 18). (see for example, applicants' specification, page 49, line 2 to page 53, line 3; and page 116, line 7 to page 118, line 10). As such, the present invention achieves an excellent and practical effect of having hardware with reduced dimensions.

Mikoshiba absolutely fails to disclose any type of formulae being used to generate the correction-use signal.

Mikoshiba only discloses the generation of equivalent pulses correcting motion picture pseudo contours that occur when the gray level shifts from 127 gray levels to 128 gray levels. As such, Mikoshiba and the other cited references neither disclose nor suggest that the shapes of motion picture pseudo contours may vary according to a display signal pattern including a change in gray level, not to mention how the variations in shape of the motion picture pseudo contours should be corrected for.

According to MPEP §2131, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in

the …claims." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913 (Fed. Cir. 1989). The elements must be arranged as required by the claims, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicants respectfully submit that the Office Action has failed to establish the required *prima facie* case of anticipation because the cited reference, Mikoshiba, fails to teach or suggest each and every feature as set forth in the claimed invention.

Applicants also respectfully submit that both Kasahara and Nito fail to make up for the deficiencies found in Mikoshiba.

To establish a *prima facie* case of Obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Like Mikoshiba, both Nito and Kasahara fail to teach or suggest the formulae for generating the correction-use signal. For example, Kasahara merely discloses pseudo contour correction in pixel blocks. However, nothing in Kasahara is taught or suggested

as to how to reduce the number of formulae by associating the formulae with combinations of gray level changes.

Applicants respectfully submit that not only does the references fail to teach or suggest each and every feature as set forth in the claimed invention, but that one of ordinary skill in the art would not have been motivated to combine/modify the teachings of Mikoshiba with Nito and/or Kasahara because there is no teaching or suggestion in any of the references regarding how or why one would modify such systems to arrive at the claimed invention.

As such, Applicants respectfully submit that independent claims 1, 7, 13, 15, 18 and 21 are allowable over Mikoshiba for at least the reasons noted above.

In addition, the dependent claims are allowable over the combination of Mikoshiba with either Kasahara and/or Nito for at least the reasons noted above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1, 3, 5, 7-9, 12, 14, 15 and 18 under 35 U.S.C. §102(b) and claims 2, 4, 6, 10, 11, 13, 16, 17 and 19 and 20 under 35 U.S.C. §103(a) is respectfully solicited.

Conclusion

In view of the foregoing, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 **to schedule a Personal Interview**.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

Respectfully submitted,

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TCB/CTB/mpe
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Attachment(s):
Abstract
Six (6) replacement drawing sheets